Claims

I claim:

1. A Collection Role Changing GUI process for changing a graphical user interface role, comprising the following steps:

   (a) receiving a role change request, and

   (b) performing a role change response to said role change request,

   thereby providing a solution to the Collection Role Changing GUI Problem, and

   thereby providing human users with a practical means for changing the functionality of graphical user interfaces in a way that was not previously possible.

2. The process of claim 1, wherein

   (a) said step of receiving a role change request receives a role change request from a source selected from the group consisting of human operators and external programs and a GUI program that is executing said step of receiving a role change request,

   thereby helping to solve the Collection Role Changing GUI Problem, and

   thereby providing GUI interfaces with a practical means for responding to role change requests that originate from both inside and outside the GUI program.

3. The process of claim 1, wherein

   (a) said step of performing a role change response obtains a role identifier from said role change request,

   thereby helping to solve the Collection Role Changing GUI Problem, and

thereby providing a practical means for clearly identifying a particular role to be installed as part of said role change response.

4. The process of claim 1, wherein

(a) said step of performing a role change response uses a role identifier, and role data read from a role data storage means, to perform a name matching operation to identify a role definition to be installed,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for identifying a particular role definition to be installed as part of said role change response.

5. The process of claim 1, wherein

(a) said step of performing a role change response uses role definition data read from a role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining a role definition to be installed as part of said role change response.

6. The process of claim 1, wherein

(a) said step of performing a role change response uses role definition data read from a context-sensitive role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way a role definition to be installed as part of said role change response.

7. The process of claim 1, wherein

(a) said step of performing a role change response uses role data read from a role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining role data to use during the performance of said role change response.

8. The process of claim 1, wherein

(a) said step of performing a role change response uses role data read from a context-sensitive role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way role data to use during the performance of said role change response.

9. The process of claim 1, wherein

(a) said step of performing a role change response uses zero or more focus variables to install a role,

thereby solving the Role Focus Variable Problem,

and thereby providing a practical means for instantiating role-specific focus variables and values as part of said role change response.

10. The process of claim 1, wherein

(a) said step of performing a role change response uses zero or more focus variable groups to install a role,

thereby solving the Role Focus Variable Problem,

and thereby providing a practical means for instantiating role-specific focus variable groups and values as part of said role change response.

11. The process of claim 1, wherein

(a) said step of performing a role change response executes one or more GUI actions selected from the group consisting of focus-loss actions and focus-gain actions,

thereby solving the Role Focus Gain Problem,

and thereby providing a practical means for executing useful focus-loss and focus-gain actions as part of said role change response.

12. The process of claim 1, wherein

(a) said step of performing a role change response uses role data selected from the group consisting of role definitions and menubar definitions and menu definitions and menu choice definitions and toolbar definitions and button definitions and focus variables and focus variable groups to update one or more internal GUI data structures while performing said role change response,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for using customized and sharable role data to carry out said role change response.

13. The process of claim 1, wherein

(a) said step of performing a role change response modifies one or more visible GUI display elements selected from the group consisting of menubars and menus and menu choices and toolbars and buttons,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for displaying role change results as part of said role change response.

14. The process of claim 1, wherein

(a) said step of performing a role change response communicates role change results to one or more destinations selected from the group consisting of computer memories and computer display screens and computer files and computer networks,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for displaying and storing role change results as part of said role change response.

15. A programmable Collection Role Changing GUI device for changing a graphical user interface role, whose actions are directed by software executing a process comprising the following steps:

(a) receiving a role change request, and

(b) performing a role change response to said role change request,

thereby providing a solution to the Collection Role Changing GUI Problem, and

thereby providing human users with a practical means for changing the functionality of graphical user interfaces in a way that was not previously possible.

16. The programmable device of claim 15, wherein

(a) said step of receiving a role change request receives a role change request from a source selected from the group consisting of human operators and external programs and a GUI program that is executing said step of receiving a role change request,

thereby helping to solve the Collection Role Changing GUI Problem, and

thereby providing GUI interfaces with a practical means for responding to role change requests that originate from both inside and outside the GUI program.

17. The programmable device of claim 15, wherein

(a) said step of performing a role change response obtains a role identifier from said role change request,

thereby helping to solve the Collection Role Changing GUI Problem, and

thereby providing a practical means for clearly identifying a particular role to be installed as part of said role change response.

18. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses a role identifier, and role data read from a role data storage means, to perform a name matching operation to identify a

role definition to be installed,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for identifying a particular role definition to be installed as part of said role change response.

19. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses role definition data read from a role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining a role definition to be installed as part of said role change response.

20. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses role definition data read from a context-sensitive role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way a role definition to be installed as part of said role change response.

21. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses role data read from a role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized

Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining role data to use during the performance of said role change response.

22. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses role data read from a context-sensitive role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way role data to use during the performance of said role change response.

23. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses zero or more focus variables to install a role,

thereby solving the Role Focus Variable Problem,

and thereby providing a practical means for instantiating role-specific focus variables and values as part of said role change response.

24. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses zero or more focus variable groups to install a role,

thereby solving the Role Focus Variable Problem,

and thereby providing a practical means for instantiating role-specific focus variable groups and values as part of said role change response.

25. The programmable device of claim 15, wherein

(a) said step of performing a role change response executes one or more GUI actions selected from the group consisting of focus-loss actions and focus-gain actions,

thereby solving the Role Focus Gain Problem,

and thereby providing a practical means for executing useful focus-loss and focus-gain actions as part of said role change response.

26. The programmable device of claim 15, wherein

(a) said step of performing a role change response uses role data selected from the group consisting of role definitions and menubar definitions and menu definitions and menu choice definitions and toolbar definitions and button definitions and focus variables and focus variable groups to update one or more internal GUI data structures while performing said role change response,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for using customized and sharable role data to carry out said role change response.

27. The programmable device of claim 15, wherein

(a) said step of performing a role change response modifies one or more visible GUI display elements selected from the group consisting of menubars and menus and menu choices and toolbars and buttons,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for displaying role change results as part of said role change response.

28. The programmable device of claim 15, wherein

(a) said step of performing a role change response communicates role change results to one or more destinations selected from the group consisting of computer memories and computer display screens and computer files and computer networks,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for displaying and storing role change results as part of said role change response.

29. A computer readable memory, encoded with data representing a Collection Role Changing GUI program that can be used to direct a computer when used by the computer, comprising:

(a) means for receiving a role change request, and

(b) means for performing a role change response to said role change request,

thereby providing a solution to the Collection Role Changing GUI Problem, and

thereby providing human users with a practical means for changing the functionality of graphical user interfaces in a way that was not previously possible.

30. The computer readable memory of claim 29, wherein

(a) said means for receiving a role change request receives a role change request from a source selected from the group consisting of human operators and external programs and a GUI program that is executing said step of receiving a role change request,

thereby helping to solve the Collection Role Changing GUI Problem, and

thereby providing GUI interfaces with a practical means for responding to role change requests that originate from both inside and outside the GUI program.

31. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response obtains a role identifier from said role change request,

thereby helping to solve the Collection Role Changing GUI Problem, and

thereby providing a practical means for clearly identifying a particular role to be installed as part of said role change response.

32. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses a role identifier, and role data read from a role data storage means, to perform a name matching operation to identify a role definition to be installed,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for identifying a particular role definition to be installed as part of said role change response.

33. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses role definition data read from a role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining a role definition to be installed as part of said role change response.

34. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses role definition data read from a context-sensitive role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way a role definition to be installed as part of said role change response.

35. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses role data read from a role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining role data to use during the performance of said role change response.

36. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses role data read from a context-sensitive role data storage means to perform said role change response,

thereby helping to solve the Collection Role Changing GUI Problem, and the Customized Role Problem, and the Sharable Role Problem, and the Scalable Role Storage Problem,

and thereby providing a practical means for obtaining in a context-sensitive way role data to use during the performance of said role change response.

37. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses zero or more focus variables to install a role,

thereby solving the Role Focus Variable Problem,

and thereby providing a practical means for instantiating role-specific focus variables and values as part of said role change response.

38. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses zero or more focus variable groups to install a role,

thereby solving the Role Focus Variable Problem,

and thereby providing a practical means for instantiating role-specific focus variable groups and values as part of said role change response.

39. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response executes one or more GUI actions selected from the group consisting of focus-loss actions and focus-gain actions,

thereby solving the Role Focus Gain Problem,

and thereby providing a practical means for executing useful focus-loss and focus-gain actions as part of said role change response.

40. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response uses role data selected from the group consisting of role definitions and menubar definitions and menu definitions and menu choice definitions and toolbar definitions and button definitions and focus variables and focus variable groups to update one or more internal GUI data structures while performing said role change response,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for using customized and sharable role data to carry out said role change response.

41. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response modifies one or more visible GUI display elements selected from the group consisting of menubars and menus and menu choices and toolbars and buttons,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for displaying role change results as part of said role change response.

42. The computer readable memory of claim 29, wherein

(a) said means for performing a role change response communicates role change results to one or more destinations selected from the group consisting of computer memories and computer display screens and computer files and computer networks,

thereby helping to solve the Collection Role Changing GUI Problem,

and thereby providing a practical means for displaying and storing role change results as part of said role change response.